

Engineer Manpower and MAGTF Mobility

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Submitted by Captain DM O'Brien  
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Major Robert Dixon, CG 8  
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In the winter of 1846, James Reed stumbled out of the swirling snow and into Sutter's Fort with a terrible story on his lips. His party of eighty men, women, and children had become stranded in the Sierra Nevada Mountains on their way to California and were starving to death. Mr. Reed organized a rescue. He returned to find half of his party lying dead in their snowy cabins. Despite his valiant efforts, Mr. Reed suffered blame and recrimination from the survivors who never forgot how a well provisioned expedition, known as the Donner Party, was left to dwindle to nothingness in extreme adversity just miles from their final destination. The Donner Party lacked the resources to survive and maneuver in winter mountain conditions.

The Marine Corps today is like the emigrant movement of 1846, pushing west across the Rocky Mountains. The Marine Corps' goal is expeditionary maneuver warfare, but its combat engineers are like the Donner Party. The combat engineers are starving and stretched to the limits of their manpower capabilities. In order for combat engineers to carry their load across the challenges of today's battlefield the Marine Corps must increase 1371 combat engineer end strength.

## **Importance of Marine Combat Engineers**

Marine combat engineers are important because they are Marine Air-Ground Task Force (MAGTF) engineers. This means that engineers are task organized across each element of the MAGTF: the ground combat element (GCE), the air combat element (ACE), the combat service support element (CSSE). A dedicated engineer battalion, tailored to the requirements of its parent organization, resides within each MAGTF element. Each focuses on and tailors itself to the mission of its MAGTF commander.

The Marine Corps' capstone concept, expeditionary maneuver warfare (EMW), requires unprecedented mobility. Marine Corps combat engineers are critical to the mobility of Marine Air-Ground Task Forces. Key military mobility tasks are combat engineer core competencies: obstacle breaching, river crossing, and route clearing. A MAGTF's ability to accomplish any of these tasks depends on combat engineer expertise and the unity of effort between all of its functional components. Engineers do not project combat power to the far side of an obstacle; a MAGTF does. By the same token, a MAGTF cannot effectively conduct route clearing with the skills of Marine combat engineers. The point is that combat engineer units must be properly manned

in order to properly play their role within the MAGTF. The MAGTF needs combat engineer combat support to ensure its operational and tactical mobility.

The Expeditionary Force Development System that replaced the old Combat Development System clearly identifies a yawning chasm between current engineer capabilities and our present and future required capabilities. The document called the *Expeditionary Maneuver Warfare Capabilities List* (ECL) clearly states that the Marine Corps currently has no capability to, "Provide MCM for maneuver forces rapidly detecting, breaching, and clearing mines, IEDs, UXO, and obstacles from the beach exit zone inland to the objective while increasing standoff/safety and decreasing timelines for expeditionary strike operations."<sup>1</sup> Engineers can provide MCM to maneuver forces at a slow, deliberate pace and at great risk to the Marines providing it. This shortfall is anathema to Expeditionary Maneuver Warfare. Command detonated mines will kill Marines conducting Distributed Operations tomorrow no less than Marines conducting Security and Stability Operations today. The Marine Corps must pay the cost of developing effective Mine Counter

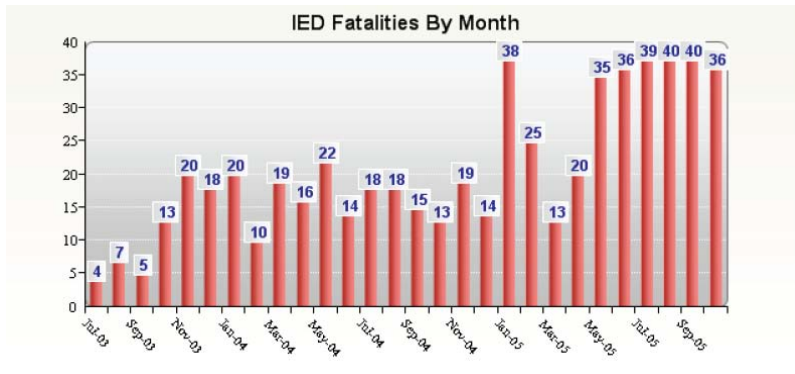
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<sup>1</sup> Marine Corps Combat Development Command, *Expeditionary Maneuver Warfare Capabilities List*. (15 April 2005): 40

Measures. These solutions cannot be made on a shoe string or on the back of woefully undermanned engineer squads.

The Global War on Terrorism has demonstrated that there is more engineer work to be done than the Marine Corps has engineers. The proliferation of Improvised Explosive Devices on the battlefield has pushed engineers past their manpower resources. Engineers are not trained or equipped to deal with the huge variety of ordnance lying on the ground. While there are some who say that engineers should not deal with it, necessity dictates otherwise (see **Figure 1**)<sup>2</sup>.

**Figure 1:** Coalition Forces IED Fatalities (Jul 03 – Oct 05)<sup>3</sup>



The fact is that so long as United States forces continue to conduct counter-insurgency operations in Iraq and

<sup>2</sup> **Figure 1** shows the number of Coalition Forces killed by victim activation or the enemy's successful command detonation of a mine (also, commonly referred to as an Improvised Explosive Device).

<sup>3</sup> According to the Iraqi Coalition Casualty Count website (<http://icasualties.org/oif/Methodology.aspx>), these statistics are derived from official DOD news releases <http://www.centcom.mil/>, <http://www.defenselink.mil/releases/>, which give name, rank, cause and place of death. This tally includes IED KIAs of all Coalition Countries.

Afghanistan, mobility, hence countering the IED threat, remains a MAGTF task.

Captured enemy ammunition is part of the IED threat. The battlefields of Iraq and Afghanistan are strewn with weapons caches, mines and unexploded ordnance. These conditions have degraded the MAGTF's mobility throughout these theaters of operation. The threat posed by Improvised Explosive Devices has stopped all but the most essential movements on the battle field. The stealthy employment of these weapons has made their detection and interdiction critical tasks. While the task of eliminating these hazards falls within the scope of Marine Corps combat engineers, they are not trained or equipped to perform it. Combat Engineers perform this task out of necessity because the Marines who are trained and equipped to handle a huge variety of ordnance cannot do it alone. Small, widely dispersed Explosive Ordnance Disposal teams cannot physically dismantle cache sites and cannot physically be present to deal with all the explosives found on the battlefield. Yet, the EOD refrain is that IEDs are not command detonated mines but something so complex and mysterious that only EOD and neurosurgeons can understand and stop them. The over-arching point is that as a MAGTF is not equipped to deal with the problem. Ironically, the

engineers are the community best suited but least able to but also indispensable to MAGTF mobility.

### **Limits on Mobility**

Planned equipment acquisitions meant to address mine counter-measures shortfalls do not constitute a mine counter-measures capability. The fielding of the Armored Vehicle Launched Bridge (AVLB) and the Assault Breaching Vehicle (ABV) will require manpower that the engineer community will take out of existing manpower structure. Who will operate these vehicles? One answer is the 1371 combat engineer military occupational specialty (MOS). But, the combat engineer battalion engineer squad is already too small. After their experience working within the combined 1<sup>st</sup> and 2<sup>nd</sup> Combat Engineer Battalion (CEB) in Operation Iraqi Freedom, Majors Wylie and Jernigan observed the following:

Currently, CEB squads are eight 1371s (combat engineer MOS). Can a combat engineer squad of eight Marines reasonably be expected to carry and employ one shotgun, one M240G machinegun, one M16 rifle with M203 grenade launcher, one M249 squad automatic weapon, and four M16 rifles while completing their demolition responsibilities. Should an infantry commander be forced to forego a weapons system or give up breaching capability? We think not.<sup>4</sup>

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<sup>4</sup> Michael Jernigan & Jay D. Wylie, "Looking to the Next War: Improving the Combat Engineer Battalions," *Marine Corps Gazette* (December 2004): 23-25.



A plan to use 1371 combat engineers to operate breaching (ABV) and bridging (AVLB) vehicles without increasing the 1371 end strength would reduce the number of 1371s available for engineer line platoons. Extending this logic begs the question: will engineers further thin out their squads to keep the requisite number of platoons or will they reduce the number of platoons to keep the size of their squads? More than equipment and technology, the size, depth and training of engineer battalions set a limit on Marine Corps mobility.

### **Austerity Breeds Controversy**

Austerity foments controversy within organizations. In the Marine Corps a controversy has risen around the serious threat of command detonated mines and the existence on the battlefield of ordnance, ammunition and improvised explosive devices. Competition over scarce resources for mine counter-mine operations has pitted engineers against the explosive ordnance disposal (EOD) community. This conflict has sensationalized the inherent dangers in captured enemy ammunition (CEA) destruction and politicized the battlefield roles of engineers and EOD.

Despite the symbiotic relationship between engineers and EOD on the battlefield, these communities are fighting for the resources to accomplish their missions. This

struggle played out in the pages of the Marine Gazette. In his article "*Expedient Ordnance/Munitions Destruction*," 1<sup>st</sup> Lieutenant Jonathan Disbro recounted how his combat engineer platoon conducted CEA missions through theater, learning through trial and error.<sup>5</sup> GySgt Higgins responded for EOD with an article called "*Safety of Combat Engineers*." Within the context of EOD competence and expertise, GySgt Higgins makes seemingly irrefutable arguments against engineers' handling CEA missions. However, within the larger context of MAGTF mobility and mine countermeasure (engineer competencies) these same arguments appear specious in the way they compartmentalize the IED threat into a special EOD task. In one example of organizational overreach, GySgt Higgins attempts to criminalize engineer efforts at CEA destruction, stating, "combat engineers conducting UXO (unexploded ordnance disposal) operations were in direct violation of 'Annex D' of U.S. Central Command's operation order."<sup>6</sup> In another example, GySgt Higgins compares engineer efforts to destroy

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<sup>5</sup> J.S.Disbro, "Expedient Ordnance/Munitions Destruction." *Marine Corps Gazette* 88:2 (February, 2004): 37-40. Retrieved online from the ProQuest Military Collection.

<sup>6</sup> A.C.Higgins, "Safety of Combat Engineers." *Marine Corps Gazette* 88:5 (May, 2004): 54-55. Retrieved online from the ProQuest Military Collection.

CEA to amateurs attempting neurosurgery.<sup>7</sup> He paints engineers as renegade amateurs, recklessly destroying ordnance that should be recovered by EOD for technical intelligence and exploitation. GySgt Higgins also overlooks the role in the area of operations of the onsite commander who will ultimately make the call, based on advice from engineers and/or EOD, to destroy or not destroy CEA. The fact is that mobility, hence countering the IED threat, is a MAGTF task.

Certainly the dispute was ugly, but for all the clamor, one organization got what it needed. The community with the most effective advocacy (EOD) received a major end strength increase not to mention the acquisition of critical equipment including robots, optics, tool kits, and mine survivable vehicles. But this outcome had unintended consequences. The struggle for resources produced a winner and a loser. It also created the impression that one side was right and one side was wrong. This struggle created a new perception: the IED is EOD turf. While this view is demonstrably false, it is widely subscribed to and has serious ramifications for EMW. IEDs cannot be considered apart from mine warfare. IEDs should not be treated as an exclusive, new line of funding for EOD robots. The

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<sup>7</sup> Higgins, 54

inability to counter IEDs should be and is considered a capability gap in the Marine Corps' mine countermeasures that degrades MAGTF mobility. IEDs are a threat that require the full attention and commitment of the MAGTF and the Expeditionary Force Development System. Increasing the end strength of combat engineers should be part of the solution.

### **Joint Engineer Equals MAGTF Engineer?**

As The Marine Corps stands up two new infantry battalions and the new Special Operations Command there should be a corresponding end strength increase for combat engineers. The temptation to employ these units and battalions without Marine combat engineers could be very strong. Does the Marine Corps really want to depend on just any engineers? Some will point to Army engineers or the Navy's Naval Construction Battalion as a possible source for our missing engineer capability. But, will joint engineers solve our problems better than Marine Corps combat engineers solve their own? Consider Operation Iraqi Freedom's engineering feats: 60 mile hose reel operations, 120 river crossings. MAGTF engineers provided unprecedented engineering solutions for unprecedented military maneuvers. For all that we did not have as a MAGTF, for all that we lacked as engineers (including theater lift and necessary

communications) we proved to be greater than the sum our parts. The MAGTF is the platform for national power projection; to it any service component can be integrated or attached. But joint engineering does not necessarily guarantee MAGTF engineering.

### **Summary**

The Marine Corps is like the emigrant movement of 1846, pushing west across the Rockies. The goal is Expeditionary Maneuver Warfare. The Engineers are like the Donner Party, starving for resources, desperate to push forward. The Marine Corps should invest in MAGTF mobility through a combat engineer end strength increase.

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2,037 words

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